

IN THE CLAIMS:

Please note that the all of the claims currently pending and under consideration in the above-referenced application are shown below, in clean form. A marked-up version of the amendments to show changes made is attached.

Please amend the claims as follows:

33. (Amended) A pre-formed solder mask, comprising:
a layer of non-metallic solder mask material having a substantially uniform thickness; and
at least one open aperture formed through said layer and located correspondingly to a contact pad location of a substrate upon which the pre-formed solder mask is to be disposed, said at least one open aperture configured to define a peripheral shape of a conductive structure to be formed on said contact pad.

34. (Previously amended) The pre-formed solder mask of claim 33, wherein said at least one open aperture is configured to be positioned over and to expose a non-peripheral region of said contact pad.

35. (Amended) The pre-formed solder mask of claim 33, wherein said substantially uniform thickness of said layer substantially corresponds to a desired height of said conductive structure.

36. The pre-formed solder mask of claim 33, wherein said solder mask material comprises a polymer.

37. (Previously amended) The pre-formed solder mask of claim 33, wherein said solder mask material shrinks or degrades upon exposure to at least one of radiation, a plasma, and a shrinking agent.

41. The pre-formed solder mask of claim 33, wherein said layer is configured to be adhered to a substrate.

42. (Amended) The pre-formed solder mask of claim 33, further comprising an adhesive on a surface of said layer.

43. (Amended) A pre-formed solder mask, comprising:
a layer of non-metallic solder mask material having a substantially uniform thickness, said layer including a surface configured to be adhered to a substrate; and
at least one open aperture formed through said layer and located correspondingly to a contact pad location of a substrate upon which the pre-formed solder mask is to be disposed, said at least one open aperture configured to define a peripheral shape of a conductive structure to be formed on said contact pad.

44. The pre-formed solder mask of claim 43, wherein said at least one open aperture is configured to be positioned over and to expose a non-peripheral region of said contact pad.

45. (Amended) The pre-formed solder mask of claim 43, wherein said substantially uniform thickness of said layer substantially corresponds to a desired height of said conductive structure.

46. The pre-formed solder mask of claim 43, wherein said solder mask material comprises a polymer.

47. The pre-formed solder mask of claim 43, wherein said solder mask material shrinks or degrades upon exposure to radiation, a plasma, or a shrinking agent.

48. The pre-formed solder mask of claim 43, wherein said surface of said layer includes an adhesive material.

49. (Amended) A semiconductor device assembly, comprising:
a substrate including at least one contact pad;
a pre-formed layer of non-metallic solder mask material disposed on said substrate, said pre-formed layer having a substantially uniform thickness; and
at least one open aperture formed through said pre-formed layer and located correspondingly to said at least one contact pad, said at least one open aperture configured to define a peripheral shape of a conductive structure to be formed therein.

50. The semiconductor device assembly of claim 49, further comprising a conductive structure substantially filling said at least one open aperture and in communication with said at least one contact.

51. The semiconductor device assembly of claim 50, wherein said conductive structure protrudes beyond an exposed surface of said pre-formed layer.

52. The semiconductor device assembly of claim 49, wherein said at least one open aperture is positioned over and exposes a non-peripheral region of said at least one contact pad.

53. The semiconductor device assembly of claim 49, wherein said substantially uniform thickness of said pre-formed layer is substantially equal to a height of said conductive structure.

54. The semiconductor device assembly of claim 49, wherein said solder mask material comprises a polymer.

55. The semiconductor device assembly of claim 49, wherein said solder mask material shrinks or degrades upon exposure to at least one of radiation, a plasma, and a shrinking agent.

56. The semiconductor device assembly of claim 49, wherein said surface of said pre-formed layer includes an adhesive material.